No.



200179

# THUR UNITHED STEATHES OF ANTERIOA

TO AUL TO WHOM THESE PRESENTS SHAUL COME:

Mississippi Agricultural & Forestry

Experiment Station

Withereas, there has been presented to the

### Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE IN THE APPLICANT IS, INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen years from the date of this grant, subject to the payment of the required fees and periodic replenishment of viable basic seed of the variety in a public repository as provided by LAW, the right to exclude others from selling the variety, or offering it for sale, or reproducing it, importing it, or exporting it, or using it in producing a hybrid or different ty therefrom, to the extent provided by the Plant Variety Protection Act 1542, as amended, 7 u.s.c. 2321 et seq.)

RYEGRASS

'Marshall'

In Lestimonn Watercot, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 29th day of June in the year of our Lord one thousand nine

hundred and eighty-four.

In R Block Secretary of Agriculture

Steer Steer Commissioner

Plant Variety Protection Office Livestock, Meat, Grain & Seed Divis Agricultural Marketing Service

Signicultural Marketing Service

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE LIVESTOCK, MEAT, GRAIN & SEED DIVISION				FORM APPROVED: OMB NO.0581-0058		
APPLICATION FOR PLANT VAR		•	may	be issued t	unless a comp been received	leted appli-
1. NAME OF APPLICANT(S) Mississippi Agricultural & Fo Experiment Station	2. TEMPORARY DESIGNATION North Mississippi Reseeding		ARIETY N	AME		
4. ADDRESS (Street and No. or R.F.D. No., City, Sta	ate, and Zip Code)	5. PHONE (Include area code)		FOR OFF	ICIAL USE ON	LY
Drawer ES Mississippi State, MS 39762		(601) 325–3005	PVPC	820	0179	
6. GENUS AND SPECIES NAME	7. FAMILY NA	ME (Botanical)	FILING	DATE 9/ TIME	8/82	
Lolium multiflorum	Poaceae		<u>"</u>	2:30	A.M.	X P.M.
8. KIND NAME  Ryegrass		DATE OF DETERMINATION  Jan. 25, 1980	ECEIVED	\$ _ 500 DATE 9/8		
10. IF THE APPLICANT NAMED IS NOT A "PERSO partnership, association, etc.)	10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation			* _250.	FOR CERTIFI	CATE
Mississippi Agricultural & Fo		eriment Station		6/4/	84	
11. IF INCORPORATED, GIVE STATE OF INCORP	ORATION		12, 0	ATE OF IN	CORPORATIO	ON
a. X Exhibit A, Origin and Breeding History of the Section 52 of the Plant Variety Protection A  b. X Exhibit B, Novelty Statement	ne Variety <i>(See</i>	c. Exhibit C, Objective D from Plant Variety Pro	tection	Office,)		t form
15. DOES THE APPLICANT(S) SPECIFY THAT SEE SEED? (See Section 83(a) of the Plant Variety Pr.	D OF THIS VARI	ETY BE SOLD BY VARIETY NAME	E ONL	Y AS A CLA	ASS OF CERTI	FIED
16. DOES THE APPLICANT(S) SPECIFY THAT THE LIMITED AS TO NUMBER OF GENERATIONS?	S VARIETY BE	17. IF "YES" TO ITEM 16, V	VHICH		<del></del>	ON No
X Yes No		BEYOND BREEDER SEE	557	egistered	Xc	ertified
18. DID THE APPLICANT(S) FILE FOR PROTECTION USA - 1980 (application withd		IETY IN THE U.S. OR OTHER COU	NTRIE	S? X	Yes (If "Yes," of countries a	give names
					No	
19. HAVE RIGHTS BEEN GRANTED IN THE U.S. C	R OTHER COUN	TRIES?	· · · · · · · · · · · · · · · · · · ·		Yes (If "Yes," of countries at	give names
				ΙXΠ	No	
20. The applicant(s) declare(s) that a viable samp plenished upon request in accordance with surface undersigned applicant(s) is (are) the own distinct, uniform, and stable as required in Surface Protection Act.  Applicant(s) is (are) informed that followers.	uch regulations : ner(s) of this sex ection 41, and is	as may be applicable.  Sually reproduced novel plant vares entitled to protection under the	iety, a provi	nd believe sions of Se	(s) that the vaction 42 of t	riety is
Applicant(s) is (are) informed that false repressionations of APPLICANT	escutation herei	n can jeopardize protection and i		n penaltie	5.	<del></del>
SIGNATURE OF APPLICANT				\$/3/	1/82	
FORM LMGS-470 (9-81) (Edition of 1-78 is obsolete	A			8-3	31-82	1

#### INSTRUCTIONS

General: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Department of Agriculture, Agricultural Marketing Service, Livestock, Meat, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

#### <u>Item</u>

16

- Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 14c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- If "Yes" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "No," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
  - See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

GPO 890-691

### EXHIBIT A

Origin and Breeding History of the Variety:

- 1. 'Marshall' originated from 29 years of natural selection from 'Common' annual ryegrass. A stand of 'Common' ryegrass was established in a pasture at the North Mississippi Branch Experiment Station at Holly Springs, Mississippi in 1949. This stand was allowed to reseed itself each of the subsequent years. The pasture was grazed by cattle each winter prior to allowing the pasture to go to seed.
- 2. A small amount of seed was harvested from the pasture in 1975 for yield tests at two locations in Mississippi. Following this it was yield tested at 5-6 locations in Mississippi for 3 years and at 11 locations in the Southeastern Region for one year. (See data attached.)
- 3. Marshall ryegrass contains some non-fluorescent seedlings. These variants occur in 0-4% of the seedlings.
- 4. Attached performance data for Marshall indicate that varietal performance has been stable over the past 4 years.

### EXHIBIT B

### Novelty Statement:

Novelty is based on the unique combination of the following characters:

'Marshall' most closely resembles 'Gulf' except that it is more cold tolerant, matures 12-15 days later, and is more susceptible to rust than 'Gulf'.

0,35

Table . Anthesis Dates of three ryegrass cultivars, Mississippi State, MS, 1980.

Cultivar	Days to anthesis*
Marshall Gulf Magnolia	42 25 35
LSD(.05)	2

<sup>\*</sup> measured from April 1, 1980.

# 8200179

# CROWN RUST ON RYEGRASS OBSERVATION PLOTS AT ANGLETON, TEXAS 1978-79 (May 21)

Entry						% Crown	rust
Tx-0-R-78-2						10	• .
St. Col 2						40	
St. Col 14						30	
Lunar			ty.			60	
Billion						30	
Ninak						40	
Tetrone						10	
MOM-LIM 93		•	•			10	
MOM-LMW 96						5	
Marshall	_•					10	
N.K. 78120	. •					10	
Fla. 1977B					•	0	
Common		· · · · · · · · · · · · · · · · · · ·				10	
Stoneville 2						35	
St. Coll						10	
WP 414		1 1				30	ta a si
WP 418			** *		. :.	20	
Mertra			* * .			.50	
NAPB R. 0081			. A			10	
NAPB R. 146				•		50	
NAPB R. 150						10	
NAPB Sunbelt		•		•	•	10 15	
MOM-LM 51						15	•
MOM-LM 7					·	40	•
MOM-LM 38					11:-	30	
MOM-LM 40 MOM-LH 43						. 50	•
MOM-LM 44						. 20	•
MOM-LM 45	1.4		•		•	10	
MOM-LH 48		•			b .	70	
MOM-LIN 49		,			•	20	
MOM-LM 51	* .		•			40	
MOM-LINV 151						20	٠
MOM-LIM 152	1.35					20	
MOM-LIM 154	. 4 <u>5</u>				•	50	
MOM-LIMI 155	· · · · · ·					<b>5</b> 0	4.5
MOM-LAW 156						50	
MOH-LH 70						7 1 .	
MOM-LMW 91						50	
MOM-LINV 92						10	
	1.0		1.0			-	

# RYEGRASS CROWN RUST TEST AT ANGLETON, TX. 1979-80

# Disease severity recorded on 5/8/80

<u>Variety</u>	% severity
Gulf	30
Common	50
Magnolia	5
Tx-0-78-1	10
Tx-0-R-78-2	5
Tx-0-R-78-3	5
Mont. Sel	5
Tetrablend 444	10
NK-78120	25
K7-20	50
Fla. Reseeding North Miss. Reseeding Ga Reseeding Multi-mo tetraploid Moritz tetraploid Shannon tetraploid Baritra Baroldi Barspectra Asso	50 75 60 20 5 50 30 40 40 20
Meritra SRGE NAPB 150 NAPB 157 LYRA Maris Sabalan Sabrina Sabel Augusta	50 70 10 50 60 10 10 10
Trident	15
State Col 2	15

Table - Evaluation of Ryegrass Grown for Forage, by Variety, Raymond, Mississippi, 1978-79.

Variety	Cold Injury 1/	Rust <u>2</u> /
	5.0	1.8
NK K7-20	5.0	1.8
NK K-8120	5.5	2.0
Tetrablend	0.	2.5
liarshall	3,5	2.3
Magnolia	3.0	2.5
Ninak .	3.5	2.3
Tefrone	5.0	2.8
Billion		3.0
Aubade	6.0 8.0	1.8
Gulf	8.0	1.0
Florida 77B	3.0	2.0
MOM LM 51	2.0	1.3
MOM LM 70	4.0	1.8
MOM LMW 91	8.0°	2.8
MOM LMW 92	· · · · · · · · · · · · · · · · · · ·	3.0
MOM LMW 96	7.5	2.5
Common	7.5	
TX-O-R-78-2	8.0	2.0
TX-O-R-78-3	<b>7.0</b>	1.3
Sunbelt	<b>2.0</b>	2.0
Penploid-4	8.5	2.8
Average	5.2	2.2

<sup>1/</sup> Cold injury ratine 2-19-79
0 = No injury. 9 = All plants dead

<sup>2/</sup> Rust Rating 6-12-79

<sup>1 #</sup> Nono 2 = Modorato 3 = Sovero

Table . Percentage of non-fluorescent seedlings of four lots of Marshall ryegrass breeder seed as determined by four tests.

Seed Lot	MSU	OSU 'Pre-Chill'	OSU 'Non-Pre-Chill'	Federal Seed Lab
1978	1.63	2.25	0.25	2.25
1979	0.56	0.75.	0.25	3.50
1980	2.24	0.50	0.00	1.75
1981	2.77	1.25	0.75	2.00

***************************************		FORM APPROVED: OMB NO. 40-R3712
FORM GR-470-36 (9-76)	U.S. DEPARTMENT OF AGRICULTURAL MARKETING SER GRAIN DIVISION HYATTSVILLE, MARYLAND 207 OBJECTIVE DESCRIPTION OF CUL RYEGRASS (Lolium spp.)	VICE OR LER CLOCK
MAME OF APPLICANT(6) Mississippi Agricultural Station	& Forestry Experiment	VARIETY NAME OR TEMPORARY DESIGNATION Marshall
ADDRESS (Street and No., or R.F.D. No.,	City, State, and Est Code)	FOR OFFICIAL USE ONLY
P.: O. Drawer ES	762	PVPO NUMBER
ritssissippi stace, MS 39		8200179
petrinent comparative trial and evaluation data.	itional description for all characteristics that can	ow. Place a zero in first box (e.g. 089 or 09) whe typical for the variety. Ranges may be given also, Measure not be adequately described in the form below. Append all
1 = L. MULTIFLORUM (annual or it	elian: includes Westerwoldicum) 2 = L. PEREN 5 = OTHER (S	INE (perennial) 3 = L. RIGIDUM (includes Wimmera)
	ting to the control of the control o	
1 = DIPLOID	RAPLOID 3 = ÖTHER 🖄	<mark>Tecty)</mark> eggat mack tongen anym molen Tecty) eggat mack tongen anym molen
Land one is		TELLENGO SEREN EGARE DE CARER ESTARE
3. DURATION:		
I 1 = ANNUAL OR BIENNIAL 2	SHORT LIVED PERENNIAL (3-4 years)	3 = PERENNIAL (more than 4 years)
1 = GULF 2 = WIMI	STANDARD CULTIVARS	and for waters are the control of
	MERA 62 3 LINN RYSTWYTH S-23 7 MANHATI	TAN 8 = PENNFINE
4. MATURITY (50% HEADED) Use stand	lards from above for comparison:	
7 1 = VERY EARLY 3 = EARLY	DAYS EARLIER THAN .	STANDARD CULTIVAR
5 = MEDIUM 7 = LATE  9 = VERY LATE	1 / DAYS LATER THAN	<del>  </del>
	1 4	11 37333 332
5. MATURE PLANT HEIGHT (Use standard	cultivars from above):	<b>数目の100</b> 4
THE THE CHORCE HIGHWAR WALLE	CM, SHORTER THAI	N STANDARD CULTIVAR
		<u> </u>
CM. TAULER THAN	STANDARD CULTIVAR	
B. PERCENT WINTER DAMAGE (estimated	as percent of the area appearing dead). Use	standard cultivars from above for comparison:
PERCENT DAMAGE OF AP		SESCARD COLTTVARS FROM ABOVE
10 10 1 TOO THURST RECT	AN SPIKES THAN	
0 9 0 PERCENT DAMAGE OF	1 STANDARD CULTIVAR	
7. TURF DENSITY Use standard cultivars		
TILLERS PER 100 SQ. CM.		AROARO CULTIVARS FROM REOVE
LESS TILLERS PER 100 SC		VAR
SAME SOUTH LESSON OF SOUTH	1 1	
MORE TILLERS PER 100 S		VAH
B. FLAG LEAF (at full growth) Use stands	ard cultivars from above:	On Divino Onesser
CM. LENGTH (from ligule to		ମିନ୍ୟର ଓ ଅନ୍ତର୍ଶ୍ୱର ଓ ଅନ୍ତର୍ଶ୍ୱର ଅଧିକ୍ରଣ TH (at widest point) ଓ ୧୯୬୭ ଅନ୍ତର୍ଶ୍ୱର ଅଧିକ୍ରଣ
\$ 4 77 4 4 5 0 4 0 4 0 6 0 6 0 6 0 6 0 6 0 6 0 6 0 6	<del></del>	1 = DEFLEXED
CM. SHORTER THAN	STANDARD CULTI	VAR 9 FLAG LEAF AT 3 = RECURVED  BOOT STAGE: 5 = HORIZONTAL
CM. LONGER THAN	STANDARD CULTIV	9 = ERECT
	STANDARD CULTI	
MM. WIDER THAN	STANDARD CHI TI	VAR Office of the State of the
MAIL WIDER THAN	STANDARD CULTI	VAR GSOUTSS

对人员的最多88

MM TOTAL LENGTH OF 10

SEEDS

14.

4

SEED:

0 0

MG, PER 1,000 SEED

MM. TOTAL WIDTH

OF TEN SEEDS

ACHAR ALPRIC VERY MO.

8200179

COMMENTS:

19.

No.



200400094

# THE UNIVERDISHAMES OF AMERICA

TO ALL TO WHOM: THESE: PRESENTS: SHALL COME;

Mississippi Agricultural and Jorestry Experiment Station

## Wherens.

PLANT VARIETY PROTECTION CERTIFICATE NUMBER 8200179 WAS ISSUED UPON THE APPLICATION OF THE MISSISSIPPI AGRICULTURAL & FORESTRY EXPERIMENT STATION ON JUNE 29, 1984, FOR THE RYEGRASS VARIETY 'MARSHALL' AND WHEREAS, THE CONSOLIDATED APPROPRIATIONS ACT OF 2004 DIRECTED THE SECRETARY OF AGRICULTURE TO ISSUE A NEW CERTIFICATE FOR A TERM OF PROTECTION OF TEN YEARS FOR THE VARIETY, NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO SAID APPLICANT AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT FOR THE TERM OF TEN YEARS FROM THE DATE OF THIS GRANT, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THERE FROM, TO THE EXTENT PROVIDED BY THE CONSOLIDATED PROPPILATIONS ACT OF 2004

#### RYEGRASS, ANNUAL

'Marshall'

In Vertinion Therest, I have hereunto set my hand and caused the seal of the Mant Anniety Brutection Office to be affixed at the City of Washington, D.C. this sixth day of Tobruary, in the year two thousand and four.

PCM Jake

Plant Variety Protection Office Agricultural Marketing Service



Agricultural Marketing Service Stop 0270-Room 3507-S 1400 Independence Avenue, SW, Washington, DC 20250-0201

#### INFORMATIONAL MEMORANDUM FOR THE SECRETARY

THROUGH:

Bill Hawks

Bill Hamds

FEB

9 51

Under Secretary

Marketing and Regulatory Programs

FROM:

A. J. Yates

Administrator

Agricultural Marketing

February 5, 2004

SUBJECT:

Plant Variety Certificate of Protection

ISSUE:

Issuance of a new Plant Variety Protection Certificate for 'Marshall' Ryegrass

### **DISCUSSION:**

The Plant Variety Protection Act (PVPA) encourages development of new and distinct varieties of seed-reproduced or tuber-propagated plants by providing intellectual property rights protection to developers. When a certificate of protection is granted, the developer has exclusive rights to sell, reproduce, import or export such varieties, or use them in the production of hybrids of different varieties.

On June 29, 1984, the Mississippi Agricultural and Forestry Experiment Station (MAFES) was issued a Certificate of Protection, number 8200179, for 'Marshal' annual ryegrass. The Certificate was issued for a fixed period of 18 years in accordance with PVPA.

On June 29, 2002, the Certificate expired.

On January 23, 2004, Congress passed an authorization to provide an additional term of protection to the 'Marshall' variety for 10 years. This arises from concerns of stakeholders, not the owner (MAFES), that the expiration of protection has the potential of causing economic injury to livestock producers resulting from genetic changes of the variety.

The authorization also states that the Secretary may terminate the certificate (at the end of any calendar year that is more than 5 years after the date of issuance of the certificate) if the Secretary determines that a new variety of seed (that is substantially based on the genetics of the variety for which the certificate was issued) is commercially viable and available in sufficient quantities to meet market demands.

#### **CONCLUSION:**

Attached is a new certificate, number 200400094, for 'Marshal' annual ryegrass for period of 10 years, for signature by the Secretary, as stated in the congressional authorization.